## CLAIMS

1. Automatic window system for saving energy, achieved by using the sun's energy during the colder season, by controlling the solar radiation during the summer, the thermal insulation, as well as controlled incidence of light into the inside of the building and a controlled exchange of air, characherized in that is comprises the following elements:

a. a frame of rolled profiles (fig. 3; 2; 1) 10 stretching along the entire perimeter of the window with form as per I, U, L, C or T, in order to incorporate complementary volume forms into the emerging hollow space, which is restricted by the configuration of I or U or the configuration of L, C or T;

b. two movable window casements (fig. 3; 2) 11, one on the outside, one on the inside 11-11a, consisting of insulating glass 14; 13, which is linked through a special profile 12 and, in this design, together with the special profile, fills in the entire volume;

c. an inner window casement (fig. 3; 2) consisting of two parts, of which one functions as a frame 11 and the other as a manually opening window casement 11a with insulating glass 13;

d. a motor-driven blind or a type of curtain on rolls (fig. 2) 15 on the inside of the outer insulating glass 14, consisting of a material with variable thermal conductivity of preferably 0.014 to 0.0125 W/m°K;

e. insulating glass (fig. 2) 14 at the outer window casement with suitable physical and optical characteristics and a variable heat transition coefficient of preferably U = 1.6 to 1.1 W/m²°K, a variable transmission coefficient of preferably 68% to 77% in order to ensure the use of solar energy, as well as a insulating glass 13 on the outer window casement with a variable heat transition coefficient of preferably U = 0.6 to 0.3 W/m²°K;

f. two window casements (fig. 2; 3) 11; 11-11a, consisting of a profile frame with suitable physical and optical characteristics and a variable heat transition coefficient of preferably U = 0.8 to 0.6 W/m²°K;

g. a drive for the named window casements with a mechanism (fig. 1; 2; 3), which is fixed and visible between both movable insulating glass casements, consisting of: two independent drive shafts 16, two independent drive motors 17, eight 'individual levers' 19; 20 of the same size, with sledge 26 or movable rolls (fig. 5; 6) 42, eight guide blocks (fig.1; 2; 3) 27 or

profile guides (fig. 5; 6) 43, four connecting rods (fig. 1; 2; 3) 21 or toothed rods (fig. 5; 6) 39 or eight parallel arranged ropes or profile rods 37; 38;

h. four multiple hinges (fig. 1; 2), each consisting of: two holders 28; 29, two levers, which are called 'wings' 30; 31 and three rotating pins 32; 33; 34;

i. an alternative mechanism (fig. 7) for moving the window casement through a 'lever system' consisting of: two holders 45; 53, three levers 46; 47; 48, five joints 16 (24); 49; 50; 51; 52, eight ropes arranged in parallel or profile rods;

l. a pipeline (fig. 3) 54 for heating and/or cooling, which is positioned on the inside and visible between both insulating glass window casements and enables the change of the heat flow;

2. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that the window casements (fig. 3) 11; 11-11a, which are integrated into the casement through I or – U profile restricted hollow space of the frame, with the open side towards the outside or in the through a C profile restricted hollow space with equal sides, through an L profile restricted hollow space with unequal sides or through a T profile limited hollow space, in their cross section aligned according to the four possibilities.

3. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that the frame (fig. 1; 2; 3) 10 also has the function of a counter-frame or even the function of the support structure of the building.

4. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that the frame (fig. 1; 2; 3) 10 or counter frame and the window casements 11; 11-11a are located in the inside and between the insulating glass glass panels 13; 14.

5. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that the frame (fig. 1; 2; 3;) 10 or counter frame, the inner window casement 11-11a and the outer window casement 11 are totally covered by the insulating glass panels 13; 14 (fig. 1; 3).

6. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that the inner window casement builds a unit (fig. 3), which however consists of two parts: one fixed part 11, opposed to another one 11a (which must be opened manually), containing insulating glass 13, and – in an open position – enables better use of solar energy for the room, better light transition capacity or – also when the outer window casement is opened towards the outside – a higher through-flow of air exchange.

7. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that the frame (fig. 3) and the window casements 11:11-11a are found on the inside and between the insulating glass 13; 14 and in this way, it increases the thermal conductivity of the frame and the window casements, as these are covered by the insulated glass panels and therefore, add to the special insulation of the frame and the window casements to the one of the glass panels.

8. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 3) through the covering of the window casements 11; 11-11a and the frame 10 through the insulated glass panels 13; 14, the overlap with the mechanism and the driving motors for opening and closing the window of the window casements is not given and the homogeneity of the frame, the window casements and the insulated glass panels are ensured.

9. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 2) the blind 15 and/or rolled curtain on the inside of the outer insulating glass 14 has a variable thermal conductivity of preferably Lambda 0.014 to 0.0125 W/m°K and therefore, the heat transfer coefficient of the insulating glass with a completely lowered blind or preferably completely lowered curtain is reduced.

10. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 2; 3) the outer insulating glass 14 has suitable physical and optical characteristics, as well as a variable heat transfer coefficient of preferably U = 1.6 to

1.1 W/m²°K and a variable solar factor of preferably 68% to 77% in order to ensure the use of solar energy.

11. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 2; 3) the inner insulation glass panel 13 has a variable heat transfer coefficient of preferably U = 0.6 to 0.3 W/m²°K.

12. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 2; 3) the heat transfer coefficient of the profile frame of the window casements 11; 11-11a, variable and preferably U = 0.8 to 0.6 W/m²°K.

13. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that the thermal insulation of the windows is achieved through a planned design, which – together with the characteristics of the variable heat transfer coefficient of preferably U = 1.6 to 1.1 W/m²°K for the outer insulating glass / of U = 0.6 to 0.3 W/m²°k for the inner insulating glass / and of U = 0.8 to 0.6 W/m²°k for the profile of each window casement, as well as a variable thermal conductivity of preferably Lambda 0.014 to 0.0125 W/m°K for the blind or the rolled curtain – optimises the insulation of the individual components: (fig. 2; 3) frame 10, window casements 11; 11-11a, insulation glass panels 13; 14 and improves the entire insulation.

14. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that air exchange is achieved through the opening (fig. 2) of the inner 11-11a and outer window casement and that the opening of the manually operating window casement 11a and the outer window casement 11 which ensures a greater flow-through between the outside and the inside.

15. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that the controlled incidence of light (fig. 2) is achieved through the motor-driven blind or rolled up curtain 15, namely through the varied positioning of the slats or through the varied positioning by driving the blind or the rolled curtain up or down.

16. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 1; 2; 3) the drive shafts 16 could be one or more and that they can be positioned in the upper or lower area of the inside of both window glass panels or evenly one up or one down or on any other place in the middle and relate to both vertical sides of the window.

17. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 1; 2; 3) the driving motor 17 with the continuous drive shaft 16 is fixed to the frame 10 and as a substitute for the holder 22 and/or can be fixed to any place at the drive shaft.

18. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 1; 2; 3; 4; 5; 6) the 'single lever' 19; 20, which make up the mechanism, can be at least four or more for the entire window, that they can be different types of geometric configurations and that the arrangement of the openings for fixing the intended mechanism could vary.

19. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 1; 2; 3; 4; 5; 6) the openings, which are intended for the 'single lever' in order to fix the intended mechanism, can be three or more.

20. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig 1; 2; 4) the 'single levers' 19; 20 are connected to each other with a straight or bent connecting rod 21 and that there can be at least four or more.

21. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 1; 2; 4) the connecting rod 21 of the 'single levers' can be exchanged through (fig. 5) two parallel arranged ropes 37; 38 or profile rods, which are strongly connected with the levers 19; 20 through a rotating pin 35; 36.

22. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 6) the connection between the 'single levers' 19; 20 can be achieved through a system consisting of a pinion and a toothed rod 39.

23. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 1; 2) the multiple hinges 29; 30; 31; 32 carry the weight of the window casements.

24. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 1; 2) the multiple hinges 29; 30; 31; 32 can be fixed on the upper or lower vertical sides of the windows and that the opening and closing of the window casements is possible parallel to the level of the frame.

25. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 1; 2) the multiple hinges 29; 30; 31; 32 can come in any form and geometric configuration and that the amount and size of the components of the guide rail can vary.

26. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 1; 3) entire mechanism for moving the window casement is visibly fixed on the inside of the window and can be seen through the insulated window casements, so that the homogeneity of the materials along the entire perimeter of the window frame, the parts of the frame, the window casements and the glass panels are secure and to prevent that the mechanism from overlapping during the moving of the window casements.

27. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 2; 4) the guide slides 26 in the rails 27 (Fig. 5; 6) can consist of movable pistons 42, which can be moved on profile rails 43.

28. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 3) the manually opened window casement 11a is on the inside of the frame 10.

29. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 1; 2; 4; 5) the mechanism, which is put in motion through a system of 'single levers' 19; 20, can also be put in motion (Fig. 7) through a lever system, consisting of two holders 45; 53, three levers 46; 47; 48 and five joints 16 (24) 49; 50; 51; 52 and that it is called the 'lever system'.

30. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 1; 2; 4; 5) each individual lever of the mechanism can be exchanged with 'individual levers' 19; 20 through a 'lever system' with several levers (fig. 7), without changing the planned design and arrangement of the 'single levers'.

31. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 7) the connection between the individual 'lever systems' can be established through a special connection of the action lever of the 'main lever system' 46 (16) with the action lever of the 'additional lever system' 46 (24), through a rod (fig. 4) 21, toothed rod (fig. 6) 39, parallel arranged ropes or profile rods (Fig. 5; 7) 37; 38.

32. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 7) the design is not changed, when the 'lever system' is provided with the drive shaft 16 and a driving motor.

33. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 7) the 'lever system' is also able to move the window casement without the use of multiple hinges, a guiding sledge, swivel-joint roller bearing and profile guides.

34. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 7) the 'lever system' can have a minimum number of four or more levers for the entire window and that each lever 46; 47; 48 of which the 'lever system' is made up, can be a different type, geometric configuration, different amount, arrangement and relevant connection and, particularly, that a variation and shifting, as well as the interaction of the levers of each individual 'lever system' is possible.

35. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 7) the 'lever systems' are connected with each other by parallel arranged ropes 37; 38 or profile rods or, according to an alternative design (fig. 4; 6), are connected through a connecting rod 21 or toothed rod 39.

36. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 3) the pipeline 54, which is fixed and continuously visible between both insulating glass units and which is filled with a liquid used for heating or cooling units, enables the heating up and/or cooling down of the air inside both glass panels through a change of temperature of this liquid and thus the change of air flow through the glass window casements in their closed position.

37. Automatic window system for saving energy according to the previously mentioned requirements, characherized in that (fig. 3) the energy arising, which is necessary for the control of the heat transition through the glass window casements, also depends on the heat conductivity, which is determined by the inner and outer double-glazed window casements in a closed position or through the existence of the conditions, which are required by this design.